APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,386	10/05/2001	Michael Loren Lamb	SJ09-2001-0037	5127

33224	7590	05/17/2005

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EXAMINER
WU, QING YUAN

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/972,386	LAMB ET AL.
	Examiner	**Art Unit**	
	Qing-Yuan Wu	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/18/05*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *1/25/02*.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-21 are pending in the application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

3.   Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

        a.   The following claim language is indefinite:

            i.   As per claim 1, it is uncertain whether "a class driver" in line 6 refers to "a

class driver," in line 4; and whether "a storage devices" in line 6, refers to "one or

more storage devices" in line 2 and "the storage devices" in line 5. In addition, it

is uncertain if the "one or more storage devices" are internal or external to the

digital data processors (i.e. if they are the same then "said" or "the" should be

used and "the class driver" and "the storage devices" must be used throughout all

the claims. Is the "one or more storage devices" a local disk to the one or more

digital data processors?).

ii.   As per claims 10, 15 and 20, these claims are rejected for the same reason

as claim 1 above.

iii.   As per claims 9 and 21, it is uncertain what applicant means by "the filter

responds to identification of a storage device for which claiming is not to be

blocked -- for which storage device claiming had previously been blocked --" (i.e.

is the blocking/unblocking or masking/unmasking status of a storage device

changing at the moment?).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S.

PG Pub 20020069245), in view of Blumenau et al (hereafter Blumenau) (U.S. Patent 6,810,396).

6.   As to claim 1, Kim teaches the invention substantially as claimed including a storage area

network (SAN) comprising one or more digital data processors in communication with one or

more storage devices, wherein at least a selected one of the digital data processors operates under

an operating system having

a port driver defining a software interface between a class driver and an adapter to which one or

more of the storage devices are coupled [pg. 7, paragraphs 107-108, and paragraph 110, lines 7-

10; Pg. 10-11, paragraphs 135-143],

a class driver for claiming a storage devices for access by the operating system and any

applications programs executing therein by invoking the port driver to which such device is

coupled [pg. 4, paragraph 76; pg. 8, paragraphs 119-120; pg. 10, paragraph 134; Fig. 23],

7.   Kim does not specifically teach a filter in communication with the port driver and the

class driver, the filter intervening to block claiming of one or more selected storage devices by

the class driver. However, Kim disclosed a filter program for access control, access share, and

access right transfer, etc. [pg, 6, paragraph 94] and a class driver in communication with a port

driver for passing requests from host to storage device [pg. 11, paragraph 143]. In addition,

Blumenau teaches a filter/adapter unit that performs filtering function to ensure that only hosts

with privileges are able to access the volume and filtering out non-privileged requests

[Blumenau, col. 4, lines 60-65; col. 5, lines 10-16].

8.   It would have been obvious to one of an ordinary skill in the art at the time the invention

was made, to have combined the teaching Kim with the teaching of Blumenau because both Kim

and Blumenau teaches network storage access [pg. 1, paragraph 7; Blumenau, col. 1, lines 25-

45].

9.   As to claim 2, Kim as modified teaches the invention substantially as claimed including

wherein the filter blocks claiming of a selected storage device by returning a failure code to the

class driver in response to its invocation of the port driver for purposes of claiming that storage

device [Blumenau, col. 16, lines 41-44]. Kim as modified does not specifically teach wherein

the operating system is a Windows NT, however Kim as modified disclosed that a host may run

in UNIX or Windows family of operating systems [pg. 1, paragraph 16, lines 7-8]. It would have

been obvious to one of an ordinary skill in the art at the time the invention was made, to have

recognized that Windows family of operating systems would have include Windows NT.

10.   As to claim 3, Kim as modified teaches the invention substantially as claimed including

wherein the operating system is a Windows 2000 [pg. 6, paragraph 104]. Kim as modified does

not specifically teach the filter blocks claiming of a selected storage device by any of (i)

intercepting a request from the class driver to the port driver for purposes of claiming that

storage device, (ii) returning a failure code in response to such request. However, Kim as

modified disclosed returning an error message to a requesting host when the request was blocked

[Blumenau, col. 16, lines 41-44]. It would have been obvious to one of an ordinary skill in the

art at the time the invention was made, to have recognized that un-privilege requests for the

storage device would be blocked regardless of where the request was intercepted.

11.   As to claim 4, Kim as modified teaches the invention substantially as claimed including

comprising an element in communication with the filter and transmitting thereto identifiers of

one or more storage devices for which claiming is to be any of blocked and not blocked

[Blumenau, col. 2, lines 18-22; col. 4, lines 34-38].

12.   As to claim 5, this claim is rejected for the same reason as claim 4 above.

13.   As to claim 6, Kim as modified teaches the invention substantially as claimed including

wherein the element transmits to the filter identifiers of one or more storage devices for which

claiming is not to be blocked, the filter intervening to block claiming of fiber channel storage

devices other than those identified for which claiming is not to be blocked [Blumenau col. 2,

lines 18-22; col. 4, line 34-col. 5, line 16].

14.   As to claims 7-8, Kim as modified does not specifically teach wherein the class driver

creates a disk object upon successfully claiming a storage device. However, Kim as modified

disclosed a bus driver and port driver creating device objects in which the device objects help

software manage hardware [pg. 7, paragraph 108, lines 6-9 and paragraph 112, lines 1-9; pg. 10,

paragraph 135; Fig. 22]. It would have been obvious to one of an ordinary skill in the art at the

time the invention was made, to have recognized the advantage of creating software objects and

to better manage the storage devices using these objects by a software as been considered by

Kim as modified.

15.   As to claim 9, this claim is rejected for the same reason as claims 1 and 3. In addition,

Kim as modified does not specifically teach the filter responds to identification of a storage

device for which claiming is not to be blocked -- for which storage device claiming had

previously been blocked -- by invoking the port driver for purposes of claiming the one or more

storage devices identified by the port driver as being coupled to the selected digital data

processor. However, Kim as modified disclosed providing access to privileged requests and

blocking out non-privileged request as indicated by information in a volume configuration

management database, and a management console for updating the information [Blumenau col.

2, lines 18-22; col. 4, line 34-col. 5, line 16]. It would have been obvious to one of an ordinary

skill in the art at the time the invention was made, to have recognized that the status of the

storage devices could be updated as been considered by Kim as modified.

16.   As to claim 10, this claim is rejected for the same reason as claims 1, 2 and 4 above.

17.   As to claim 11, this claim is rejected for the same reason as claims 1 and 10 above.

18.   As to claim 12, Kim as modified does not specifically teach wherein the manager digital

data processor is coupled to the selected digital data processors by a second network. However,

Kim as modified disclosed a management console having access to update information of the

volume configuration management database [Blumenau col. 2, lines 18-22; col. 4, line 34-col. 5,

line 16]. It would have been obvious to one of an ordinary skill in the art at the time the

invention was made, to have recognized that the manager digital processor could communicate

and update information/criteria for filtering regardless of its location.

19.   As to claim 13, this claim is rejected for the same reason as claim 12 above. In addition,

Kim as modified teaches wherein the first network comprises fiber channel [Blumenau, 14, Fig.

1].

20.   As to claim 14, Kim as modified does not specifically teach a graphical user interface.

However, Kim as modified disclosed system administrator/a management console having access

to update information of the volume configuration management database [Blumenau col. 2, lines

18-22; col. 4, line 34-col. 5, line 16]. It would have been obvious to one of an ordinary skill in

the art at the time the invention was made, to have recognized that an interface has to be present

in order for the information to be enter by the system administrator or by the system

administrator through the use of the management console.

21.   As to claim 15, this claim is rejected for the same reason as claims 1, 3, 6 and 10 above.

22.   As to claims 16-19, these claims are rejected for the same reason as claims 11-14 above.

23.   As to claim 20, this claim is rejected for the same reason as claims 1, 4, and 15 above.

Kim as modified does not specifically teach a plug-n-play manager that invokes the port driver to

populate a data structure with data pertaining to one or more storage devices that are coupled the

adapter, and the filter block access to selected ones of the storage devices by removing from the

data structure at least selected data pertaining those storage devices. However, Kim as modified

disclosed generating a filter table with data pertaining to one or more storage devices that are

coupled the adapter [Blumenau, col. 4, lines 60-62], and providing access to privileged requests

and blocking out non-privileged request as indicated by information in a volume configuration

management database, setting and unsetting a bitmask to indicate accessibility of a storage

devices [Blumenau col. 2, lines 18-22; col. 4, line 34-col. 5, line 16]. It would have been

obvious to one of an ordinary skill in the art at the time the invention was made, to have include

the invoking of the port driver because the port driver is bridge between the class driver and

storage devices and responsible for adding and removing the storage devices (i.e. create/remove

device object) [pgs. 10-11, paragraphs 134-141], and controlling the access of the storage

devices by indicating the availability/accessibility of the storage devices.

24.   As to claim 21, this claim is rejected for the same reason as claims 9 and 20 above.

25.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Qing-Yuan Wu whose telephone number is (571) 272-3776. The

examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Qing-Yuan Wu

Examiner

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Art Unit 2194